

CLAIMS

What is claimed is:

1. A method of port type agnostic proxy support for web services intermediaries, the method comprising:
  - 5 receiving in a web services intermediary a request for execution of a web services operation, wherein the request includes parametric information from which an endpoint for a target service that supports the operation can be identified;
  - 10 identifying, in dependence upon the parametric data, the endpoint for a target service that supports the operation;
  - creating a target service request for execution of the operation on the target service; and
  - 15 issuing the target service request to the target service.
2. The method of claim 1 wherein the target service request as created and issued to the target service bears unexamined and unmodified message contents of the request received in the web services intermediary.
3. The method of claim 1 further comprising identifying to a requester an endpoint of the web services intermediary as an endpoint that supports the operation.

4. The method of claim 1 wherein the parametric information includes a port type for the operation.
5. The method of claim 1 wherein identifying, in dependence upon the parametric information, the endpoint for a target service that supports the operation further comprises:
  - 5 identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation; and  
  
selecting one endpoint from the multiplicity of endpoints in accordance with selection rules.
- 10 6. The method of claim 5 wherein:  
  
the parametric information includes a port type for the operation, and
  - 5 identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation comprises identifying from a registry, in dependence upon the port type, a multiplicity of target services for the port type.
7. The method of claim 5 wherein selecting one endpoint from the multiplicity of endpoints further comprises selecting one endpoint from the multiplicity of endpoints in accordance with selection rules for load balancing among target services.

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8. The method of claim 1 wherein creating a target service request for execution of the operation on the target service comprises:

composing the request in a data structure useful in a binding-neutral interface;

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and

calling the binding-neutral interface, passing the request as a call parameter.

9. The method of claim 1 wherein issuing the target service request to the target service comprises calling one or more member methods in a binding-neutral interface.

10. The method of claim 1 further comprising:

receiving in the intermediary a response from the target service;

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creating in the intermediary, in dependence upon the response from the target service, a response from the intermediary, and

returning the response from the intermediary to the requesting client.

11. A system for port type agnostic proxy support for web services intermediaries, the system comprising:
- 5 means for receiving in a web services intermediary a request for execution of a web services operation, wherein the request includes parametric information from which an endpoint for a target service that supports the operation can be identified;
- 10 means for identifying, in dependence upon the parametric data, the endpoint for a target service that supports the operation;
- means for creating a target service request for execution of the operation on the target service; and
- 15 means for issuing the target service request to the target service.
12. The system of claim 11 wherein the target service request as created and issued to the target service bears unexamined and unmodified message contents of the request received in the web services intermediary.
13. The system of claim 11 further comprising means for identifying to a requester an endpoint of the web services intermediary as an endpoint that supports the operation.
14. The system of claim 11 wherein the parametric information includes a port type for the operation.

15. The system of claim 11 wherein means for identifying, in dependence upon the parametric information, the endpoint for a target service that supports the operation further comprises:
- 5 means for identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation; and
- means for selecting one endpoint from the multiplicity of endpoints in accordance with selection rules.
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16. The system of claim 15 wherein:
- the parametric information includes a port type for the operation, and
- 5 means for identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation comprises means for identifying from a registry, in dependence upon the port type, a multiplicity of target services for the port type.
17. The system of claim 15 wherein means for selecting one endpoint from the multiplicity of endpoints further comprises means for selecting one endpoint from the multiplicity of endpoints in accordance with selection rules for load balancing among target services.
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18. The system of claim 11 wherein means for creating a target service request for execution of the operation on the target service comprises:

5 means for composing the request in a data structure useful in a binding-neutral interface; and

means for calling the binding-neutral interface, passing the request as a call parameter.

19. The system of claim 11 wherein means for issuing the target service request to the target service comprises means for calling one or more member methods in a binding-neutral interface.

20. The system of claim 11 further comprising:

means for receiving in the intermediary a response from the target service;

5 means for creating in the intermediary, in dependence upon the response from the target service, a response from the intermediary; and

means for returning the response from the intermediary to the requesting client.

21. A computer program product for port type agnostic proxy support for web services intermediaries, the computer program product comprising:

a recording medium;

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means, recorded on the recording medium, for receiving in a web services intermediary a request for execution of a web services operation, wherein the request includes parametric information from which an endpoint for a target service that supports the operation can be identified;

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means, recorded on the recording medium, for identifying, in dependence upon the parametric data, the endpoint for a target service that supports the operation;

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means, recorded on the recording medium, for creating a target service request for execution of the operation on the target service; and

means, recorded on the recording medium, for issuing the target service request to the target service.

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22. The computer program product of claim 21 wherein the target service request as created and issued to the target service bears unexamined and unmodified message contents of the request received in the web services intermediary.

23. The computer program product of claim 21 further comprising means, recorded on the recording medium, for identifying to a requester an endpoint of the web services intermediary as an endpoint that supports the operation.

24. The computer program product of claim 21 wherein the parametric information includes a port type for the operation.
25. The computer program product of claim 21 wherein means for identifying, in dependence upon the parametric information, the endpoint for a target service that supports the operation further comprises:
- 5 means, recorded on the recording medium, for identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation; and
- means, recorded on the recording medium, for selecting one endpoint from the
- 10 multiplicity of endpoints in accordance with selection rules.
26. The computer program product of claim 25 wherein:
- the parametric information includes a port type for the operation, and
- 5 means for identifying, in dependence upon the parametric information, a multiplicity of endpoints of target services that support the operation comprises means, recorded on the recording medium, for identifying from a registry, in dependence upon the port type, a multiplicity of target services for the port type.
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27. The computer program product of claim 25 wherein means for selecting one endpoint from the multiplicity of endpoints further comprises means, recorded



5 on the recording medium, for selecting one endpoint from the multiplicity of endpoints in accordance with selection rules for load balancing among target services.

28. The computer program product of claim 21 wherein means for creating a target service request for execution of the operation on the target service comprises:

5 means, recorded on the recording medium, for composing the request in a data structure useful in a binding-neutral interface; and

10 means, recorded on the recording medium, for calling the binding-neutral interface, passing the request as a call parameter.

29. The computer program product of claim 21 wherein means for issuing the target service request to the target service comprises means, recorded on the recording medium, for calling one or more member methods in a binding-neutral interface.

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30. The computer program product of claim 21 further comprising:

means, recorded on the recording medium, for receiving in the intermediary a response from the target service;

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means, recorded on the recording medium, for creating in the intermediary, in dependence upon the response from the target service, a response from the intermediary; and

- 10 means, recorded on the recording medium, for returning the response from the intermediary to the requesting client.